

Selected Publications

1. Eldemery, F., Joiner, K. S., Toro, H., and van Santen, V. L. (2017). Protection against infectious bronchitis virus by spike ectodomain subunit vaccine. *Vaccine* 35, 5864-5871.
2. Eldemery, F., Li, Y., Yu, Q., van Santen, V. L., and Toro, H. (2017). Infectious bronchitis virus S2 of 4/91 expressed from recombinant virus does not protect against Ark-type challenge. *Avian Diseases* 61, 397-401.
3. Zegpi, R. A., Breedlove, C., van Santen, V. L., Rasmussen-Ivey, C. R., and Toro, H. (2017). Kidney cell-adapted infectious bronchitis ArkDPI vaccine is stable and protective. *Avian Diseases* 61, 221-228.
4. Ghetas, A., van Santen, V. L., Joiner, K. S., and Toro, H. (2016). Kidney cell-adapted infectious bronchitis virus Arkansas Delmarva poultry industry vaccine confers effective protection against challenge. *Avian Diseases* 60, 418-423.
5. Toro, H., van Santen, V. L., and Breedlove, C. (2016). Inactivation of avian influenza virus in nonpelleted chicken feed. *Avian Diseases* 60, 846-849.
6. Ghetas, A. M., Thaxton, G. E., Breedlove, C., van Santen, V. L., and Toro, H. (2015). Effects of adaptation of infectious bronchitis virus Arkansas attenuated vaccine to embryonic kidney cells *Avian Diseases* 59, 106-113.
7. Ndegwa, E. N., Bartlett, S. N., Toro, H., Joiner, K. S., and van Santen, V. L. (2015). Combined infectious bronchitis virus Arkansas and Massachusetts serotype vaccination suppresses replication of Arkansas vaccine virus. *Avian Pathology* 44, 408-420.
8. Toro, H., van Santen, V. L., Ghetas, A. M., and Joiner, K. S. (2015). Cross-protection by infectious bronchitis viruses under controlled experimental conditions. *Avian Diseases* 59, 532-536.
9. Toro, H., Zhang, J. F., Gallardo, R. A., van Santen, V. L., van Ginkel, F. W., Joiner, K. S., and Breedlove, C. (2014). S1 of distinct IBV population expressed from recombinant adenovirus confers protection against challenge. *Avian Diseases* 58, 211-215.
10. Ndegwa, E. N., Toro, H., and van Santen, V. L. (2014). Comparison of vaccine subpopulation selection, viral loads, vaccine virus persistence in trachea and cloaca, and mucosal antibody responses after vaccination with two different Arkansas Delmarva poultry industries-derived infectious bronchitis virus vaccines. *Avian Diseases* 58, 102-110.
11. Toro, H., Zhao, W., Breedlove, C., Zhang, Z., van Santen, V. L., and Yu, Q. (2014). Infectious bronchitis virus S2 expressed from recombinant virus confers broad protection against challenge. *Avian Diseases* 58, 83-89.
12. Schat, K. A. and van Santen, V. L. 2013. Chicken infectious anemia. In D. E. Swayne, *et al. eds. Diseases of Poultry* 13 edn., (pp. 248-264, 276-284) Ames: Wiley-Blackwell Publishing.
13. Toro, H., van Santen, V. L., and Jackwood, M. W. (2012). Genetic diversity and selection regulates evolution of infectious bronchitis virus *Avian Diseases* 56, 449-455.

14. Toro, H., Pennington, D., Gallardo, R. A., van Santen, V. L., van Ginkel, F. W., Zhang, J., and Joiner, K. S. (2012). Infectious bronchitis virus subpopulations in vaccinated chickens after challenge. *Avian Diseases* 56, 501-508.
15. Ndegwa, E. N., Joiner, K. S., Toro, H., van Ginkel, F. W., and van Santen, V. L. (2012). The proportion of specific viral subpopulations in attenuated Arkansas Delmarva poultry industry infectious bronchitis vaccines influences vaccination outcome. *Avian Diseases* 56, 642-653.
16. Gallardo, R. A., van Santen, V. L., and Toro, H. (2012). Effects of chicken anaemia virus and infectious bursal disease virus-induced immunodeficiency on infectious bronchitis virus replication and genotypic drift. *Avian Pathology* 41, 451-458.
17. Gallardo, R. A., van Santen, V. L., and Toro, H. (2010). Host intraspatial selection of infectious bronchitis virus populations. *Avian Diseases* 54, 807-813.
18. Toro, H., van Santen, V. L., Hoerr, F. J., and Breedlove, C. (2009). Effects of chicken anemia virus and infectious bursal disease virus in commercial chickens. *Avian Diseases* 53, 94-102.
19. van Santen, V. L. and Toro, H. (2008). Rapid selection in chickens of subpopulations within ArkDPI-derived infectious bronchitis virus vaccines. *Avian Pathology* 37, 293-306.
20. van Ginkel, F. W., van Santen, V. L., Gulley, S. L., and Toro, H. (2008). Infectious bronchitis virus in the chicken Harderian gland and lachrymal fluid: Viral load, infectivity, immune cell responses, and effects of viral immunodeficiency. *Avian Diseases* 52, 608-617.
21. Schat, K. A. and van Santen, V. L. 2008. Chicken infectious anemia. In Y. M. Saif, *et al.*, eds. *Diseases of poultry* 12 edn., (pp. 211-235) Blackwell Publishing.
22. van Santen, V. L., Toro, H., and Hoerr, F. J. (2007). Biological characteristics of chicken anemia virus regenerated from clinical specimen by PCR. *Avian Diseases* 51, 66-77.
23. Joiner, K. S., Hoerr, F. J., Ewald, S. J., van Santen, V. L., J. C. Wright, van Ginkel, F. W., and Toro, H. (2007). Pathogenesis of infectious bronchitis virus in vaccinated chickens of two different MHC B complex genotypes. *Avian Diseases* 51, 758-763.
24. Toro, H., van Santen, V. L., Li, L., Lockaby, S. B., van Santen, E., and Hoerr, F. J. (2006). Epidemiological and experimental evidence for immunodeficiency affecting avian infectious bronchitis. *Avian Pathology* 35, 455-464.
25. Joiner, K. S., Ewald, S. J., Hoerr, F. J., van Santen, V. L., and Toro, H. (2005). Oral infection with chicken anemia virus in 4-wk broiler breeders: Lack of effect of major histocompatibility B complex genotype. *Avian Diseases* 49, 482-487.
26. van Santen, V. L., Kaltenboeck, B., Joiner, K. S., Macklin, K. S., and Norton, R. A. (2004). Real-time quantitative PCR-based serum neutralization test for detection and titration of neutralizing antibodies to chicken anemia virus. *Journal of Virological Methods* 115, 123-135.
27. van Santen, V. L., Hoerr, F. J., Joiner, K. S., Murray, C., Petrenko, N., and Toro, H. (2004). Pathogenesis of chicken anemia virus: Comparison of the oral and the intramuscular routes of infection. *Avian Diseases* 48, 494-504.

28. Donofrio, G., Cavarani, S., Simone, T., and van Santen, V. L. (2002). Potential of bovine herpesvirus 4 as a gene delivery vector. *Journal of Virological Methods* 101, 49-61.
29. van Santen, V. L., Li, L., Hoerr, F. J., and Lauerman, L. H. (2001). Genetic characterization of chicken anemia virus from commercial broiler chickens in Alabama. *Avian Diseases* 45, 373-388.
30. Donofrio, G. and van Santen, V. L. (2001). A bovine macrophage cell line supports bhv-4 persistent infection. *Journal of General Virology* 82, 1181-1185.
31. Donofrio, G., Cavarani, S., and van Santen, V. L. (2000). Establishment of a cell line persistently infected with bovine herpesvirus-4 by use of a recombinant virus. *Journal of General Virology* 81, 1807-1814.